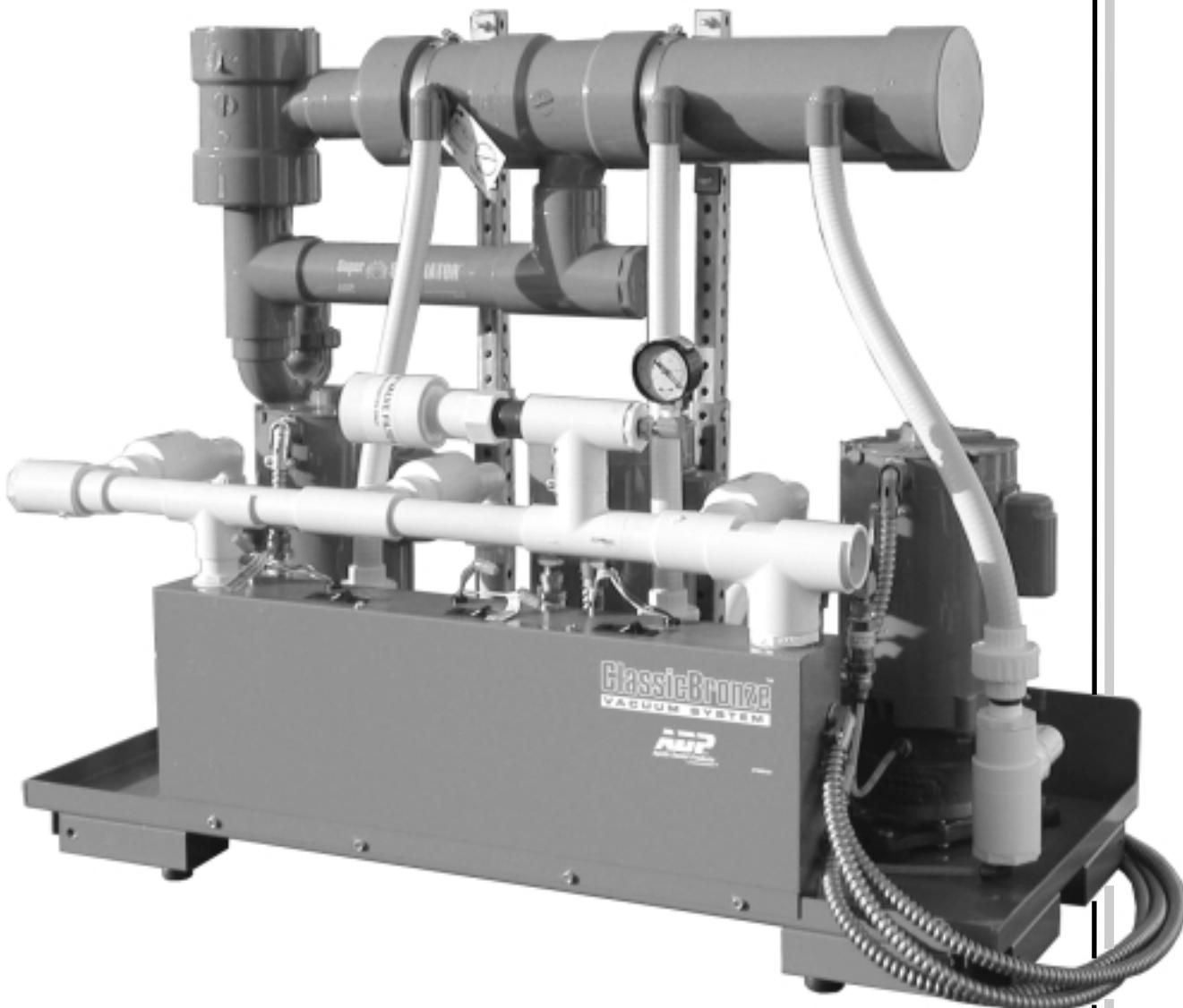




TROUBLE-SHOOTING GUIDE

VACUUM COMPRESSOR



APOLLO DENTAL PRODUCTS, INC.

Introduction

This guide is designed to save you time and help you trouble-shoot ADP vacuum systems. You'll find step-by-step instructions, along with exploded parts diagrams to help you correctly identify the internal components and their related part numbers. If you need further assistance, please contact the ADP Technical Support Team. Please have the model number and serial number(s) available.

Technical Support

Phone: 800/233-4151 • 559/292-1444

Fax: 559/292-1555

Email: support@apollodental.com

Monday - Friday

7:00 a.m. - 5:00 p.m. (Pacific Time)



Apollo Dental Products, Inc.

245 W. Dakota Ave. • Clovis, California 93612

245 West Dakota Avenue

Clovis, California 93612

www.apollo dental.com

For additional copies of this Trouble-Shooting Guide, you may order part number AMM45010.

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Product, Service and Availability

Apollo Dental Products is committed to being a leader in the dental industry. We are continually redefining service expectations in effort to build and maintain the best full service, full support relationships with our customers, the dealers. We are constantly striving to improve this relationship by offering new technologies, products and services.

Product Availability

We strive to maintain our position as the most reliable supplier of dental air and vacuum systems, merchandise and accessories in the dental industry.

- Expedite Orders / Quick Order Processing
- Distribution Centers - We can ship product from several regional Distribution Centers.
- Smart stocking of the most popular products.

Innovative Products

We manufacture a number of special equipment items that go above and beyond industry standard, including:

- Organizer™ - A complete compressor and vacuum package on wheels.
- Distillers - The only commercial grade water distillation system available on the market.
- Liquid-Ring Vacuums - UltraVac®, Gold Series™ and Classic Bronze™.
- Dry Vacuum Systems - DryVac™

Product Quality

Each product is carefully engineered to surpass performance expectations and include performance-enhancing features to help ensure that each application is a success.

- Parametric Modeling/CNC Machining
- Rigorous in-house and field testing

Service and Support

We offer a full range of responsive services and programs, providing the highest level of support for our customers.

- DentaCad
- Loaner Vacuum / Compressor
- World Wide Web
- Online Parts Lookup
- Rebuild / Express Repairs
- Representation & Experience in the field
- Specialty Products
- Product Flexibility
- Custom Design
- Technical Support and Customer Service

Global Presence

From California to Maine, and all across the USA - Apollo Dental Products has helped dealers place successful installations for dentists relying upon only the highest quality air and vacuum systems. In the International market we have customers in:

- Asia
- Australia
- China
- Eastern Europe
- Latin America
- Middle East
- Russia

A P O L L O D E N T A L P R O D U C T S , I N C .

CORPORATE

245 W. Dakota Ave.
Clovis, CA 93612
U.S.A

USA & CANADA

Phone (800) 233-4151
Fax (800) 880-9412
Phone (559) 292-1444
Fax (559) 292-1555

INTERNATIONAL

Phone 01 (559) 292-1444
Fax 01 (559) 292-1555

www.apollo dental.com

Customer Service/Technical Support

Department hours are from 7:00 AM through 5:00 PM PST. ADP Customer Service/Technical Support is available for order entry and technical support by phone (800) 233-4151 or (559) 292-1444 or FAX (559) 292-1555, Monday through Friday. Fridays we are open until 4:00 PM PST and we are closed on major holidays.

Additional product documentation and specifications are available through our automated fax library at your request or at our website at <http://www.apollo dental.com>. For extensive technical service, we refer you to the Apollo Engineering Team for problem solving.

Order Processing

All orders for equipment and accessories must be placed through an authorized dealer and processed by Apollo Dental Products, 245 West Dakota Avenue, Clovis, CA 93612, U.S.A.

- All equipment and accessories will be shipped C.O.D. unless your business has been issued a line of credit.
- Credit terms require invoices to be paid within 30 days of the invoice date. A 1.5% per month service charge applies on all unpaid balances in excess of 45 days.
- Orders are confirmed via FAX. You must provide a Telefax number.
- There will be a \$25.00 service charge on all returned checks.

Please include the following information with your order:

| | | |
|-------------------------|-------------------------|----------------------------------|
| • Purchase Order Number | • Requested Ship Date | • Name of Person Placing Order |
| • Model Number | • Side Mark Information | • Method of Shipment and Address |

Shipping / Damage

- All shipments are F.O.B. Clovis, California or from one of the regional distribution sites.
- Products are shipped via UPS, FedEx or DHL. All products that exceed the UPS maximum size (150 lbs. or 103" length or 130" length/girth combined) will be shipped via common carrier. C.O.D. charges will be added to all C.O.D. shipments.
- At your request, we will ship via any air express carrier, at your expense.
- UPS DAMAGE: Accept shipment and file claim with UPS.
- TRUCK/AIR DAMAGE: Accept and note all damages clearly on the bill of lading. Apollo Dental Products is not responsible for concealed damage. The dealer is responsible for filing damage claim with the carrier. No credit will be issued on freight damaged replacement parts.

Product Return

Dealers may return authorized non-defective products within 90 days of the invoice date under the following conditions:

- **There is a 15% restocking charge on all non-defective returns.**
- All returned products must be in condition to resell. (unopened, undamaged, complete and in the original packaging)
- Your account must be current with no past due balances.
- Returns will be credited at the lower of the invoice price or current dealer price. Credit memos for use against future purchases will be issued for authorized returns.
- Only products currently offered will be accepted.

To expedite the return procedure:

You must obtain a Return Authorization Number (R.A.N.) from ADP Technical Support prior to returning the goods.

Please provide the following information:

| | | | |
|---|---------------------------------|---------------------|----------------------|
| • Company Name | • Invoice Date | • Serial Number | • New Item Requested |
| • Invoice Number or Order Number | • Product Name and Model Number | • Reason for Return | |
| • Display the R.A.N. on the shipping label of all boxes containing returned goods. | | | |
| • Returned goods must be shipped freight prepaid in their original boxes and packing materials. | | | |

Warranty

All ADP products are thoroughly inspected and tested in accordance with rigid specifications and standards. Our products are guaranteed against any defective material and workmanship from the date of shipment; provided, that the installation, operation, and maintenance is done in accordance with ADP procedures as outlined in our Installation and Maintenance Guides. **Warranty cards must be returned to ADP within ten days of installation to effect warranty.** No other warranties or guarantees, expressed or implied are made.

ADP's obligation under the warranty is to provide parts for the repair or, at its option, to provide the replacement product (excluding labor). All special, incidental and/or consequential damages are excluded. We will not issue credit for product without first attempting to correct the problem in the field. Written notice of breach of warranty must be given to ADP within the warranty period. The warranty does not cover damage resulting from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilizing chemicals and processes. Failure to follow instructions provided in ADP's Installation and Maintenance Guides may void the warranty.

* All warranty repairs must be repaired by authorized Dealers and/or service dealers only - no exceptions.

* Labor charges are NOT included.

Warranty Periods from Date of Shipment

Following is the warranty policy for various products and replacement parts.

| | |
|--|--------------|
| Lubricated Air Compressors | 2 Years |
| Scroll Type Oil-Less Air Compressor (Revolution™ Model) | 2 Years |
| Piston Type Oil-Less Compressors | 3 Years |
| Combi™ and Organizer™ Compressor/Vacuum System | 2 Years* |
| Classic Bronze™ Vacuum | 2 Years |
| Gold Series™ Vacuum (Stainless Steel & Tin Bronze Components Only Excluding Shaft) | 3 Years** |
| UltraVac™ Vacuum (Stainless Steel Components Only Excluding Shaft) | 5 Years** |
| Dry Vacuum (DryVac™ and Centrifugal Models) | 2 Years |
| Refrigerated Air Dryer | 2 Years*** |
| Replacement Parts and Accessories | 90 Days**** |
| Rebuild Program (Repair of non-warranty vacuums) | 6 Months**** |

* Combi and Organizer Systems carry a 2 year warranty period on all electrical components. Warranty periods for the compressor heads and vacuum pumps reflect the standard warranty for each type.

** All other vacuum parts/components such as motors, seals, electrical assemblies, etc. are warranted for 2 years.

*** The manufacturer provides warranty service in the field. The customer must contact Apollo Dental Products for an authorized repair facility in their area. Do not send these items back.

**** Replacement parts are covered under the remaining warranty of the unit they are replacing, or 90 days from the date of shipment, which ever is the longest. Repairs are 90 days or remainder of warranty period.

- Warranty period starts from the installation date indicated on the warranty card. If warranty card is not returned, warranty period will start on the day the item is shipped.
- Shipping damage or damage caused by equipment handlers and installers is not covered.

No other warranties or guarantees, expressed or implied are made.

General Notes:

- All prices are based on U.S. currency.
- All prices and specifications are subject to change without notice.
- All weights reflected are shipping weights.

Listings

- **Underwriter's Laboratories (UL) (cUL) File Number MH13627**
- **U.S. Food and Drug Administration (FDA) File Number 29379227**

Vacuum— Rebuild Program



- **Fast turn-around time:**
 - 3 days on Apollo Dental Products models**
 - 5 days on other manufacturer models**
- **6 Month Warranty**
- **Free transport cases provided**

Standard vacuum rebuilds include replacement and/or repair of:

- Vacuum Relief Valve • Electrical Components • Strainer • Intake Filter •
- Vacuum Gauge • Bearings • Vacuum Breaker • Seals •

Apollo Dental Products, Inc.
Innovative Products. Simple Solutions.

245 West Dakota Avenue • Clovis, CA 93612

Phone: 800/233-4151 (US & Canada)
559/292-1444 (International Customers)

Fax: 559/292-1555

www.apollo dental.com

**For more information,
call our Rebuild Department**

800 233-4151

**or e-mail:
rebuild@apollodental.com**

Liquid-Ring Vacuum Differences

Apollo Dental Products vacuum pumps are consistently providing superior evacuation because of their innovative design and the attention given to performance enhancing details.

The Proof Is In The Design

Thicker Housing Walls:

Due to the increase in cavity preparation techniques that involve air abrasion, liquid-ring pumps are experiencing accelerated wear rates. Our new housings feature increased wall thickness to provide more strength in the areas most susceptible to wear from air abrasion.



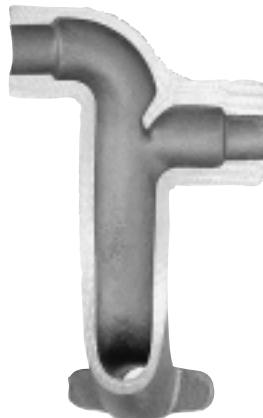
Impeller Blade:

Impeller blade design has long been one of critical factors in improving vacuum output. We've reduced blade thickness and increased chamber size to maximize vacuum output by up to 25% over the competition. Our modified blades increase life expectancy and provide unmatched performance advantages over traditional vacuum pumps.



Porting Design:

We've redesigned the flow path of liquids and air through the pump for smoother flow and reduction of possible debris build-up. The enhanced porting helps increase pump life and improve pump efficiency.



Single Vacuum Specification Table

| Vacuum Model | Max. Number of Users | Width | Depth | Height | Weight (Shipping) | Total Horsepower | Voltage | amps | Hz | Total Water Consumption (GPM)* | Vacuum Drain Connection (PVC Slip) | Fresh Water Connection (NPT) | Dispos-A-Bowl Replacement |
|-------------------|----------------------|--------|--------|--------|-------------------|------------------|-------------|---------|----|--------------------------------|------------------------------------|------------------------------|------------------------------|
| AVG10S / AVU10S | 3 | 13 in. | 11 in. | 15 in. | 69 lb. | 1 | 115/208-230 | 16/28.1 | 60 | 30/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVG10SF / AVU10SF | 3 | 33 cm. | 28 cm. | 38 cm. | 31 kg. | 1 | 220 | 8.1 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVB10S | 2 | 13 in. | 11 in. | 15 in. | 70 lb. | 1 | 115/208-230 | 16/28.1 | 60 | 30/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVB10SE | 2 | 13 in. | 11 in. | 15 in. | 66 lb. | 1 | 115/208-230 | 16/28.1 | 60 | 30/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVB10SF | 2 | 33 cm. | 28 cm. | 38 cm. | 32 kg. | 1 | 220 | 8.1 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVB10SFE | 2 | 33 cm. | 28 cm. | 38 cm. | 30 kg. | 1 | 220 | 8.1 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVG15S / AVU15S | 4 | 13 in. | 11 in. | 17 in. | 74 lb. | 1 1/2 | 115/208-230 | 22/11 | 60 | 40/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVG15SF / AVU15SF | 4 | 33 cm. | 28 cm. | 43 cm. | 34 kg. | 1 1/2 | 220 | 11.0 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVB15S | 3 | 13 in. | 11 in. | 17 in. | 75 lb. | 1 1/2 | 115/208-230 | 22/11 | 60 | 40/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVB15SE | 3 | 13 in. | 11 in. | 17 in. | 71 lb. | 1 1/2 | 115/208-230 | 22/11 | 60 | 40/20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVB15SF | 3 | 33 cm. | 28 cm. | 43 cm. | 34 kg. | 1 1/2 | 220 | 11.0 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVB15SFE | 3 | 33 cm. | 28 cm. | 43 cm. | 32 kg. | 1 1/2 | 220 | 11.0 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVB20S | 4 | 13 in. | 11 in. | 18 in. | 83 lb. | 2 | 208-230 | 12.0 | 60 | 20 | 1/2 | 3/4 in. | 1/2, 1/4 in. or 3/8 in. Tube |
| AVB20SF | 4 | 33 cm. | 28 cm. | 46 cm. | 38 kg. | 2 | 220 | 11.0 | 50 | 20 | 1/2 | 19 mm. | 3/8 in. BSPT-F |
| AVG20S / AVU20S | 5 | 13 in. | 11 in. | 18 in. | 85 lb. | 2 | 208-230 | 12.0 | 60 | 20 | 1/2 | 1 in. | 3/4 in. |
| AVG20SF / AVU20SF | 5 | 33 cm. | 28 cm. | 46 cm. | 39 kg. | 2 | 220 | 12.0 | 50 | 20 | 1/2 | 25 mm. | 3/8 in. BSPT-F |
| AVG30S / AVU30S | 7 | 13 in. | 11 in. | 20 in. | 89 lb. | 3 | 208-230 | 14 | 60 | 30 | 1/2 | 1 in. | 3/4 in. |
| AVG30SF / AVU30SF | 7 | 33 cm. | 28 cm. | 51 cm. | 40 kg. | 3 | 220 | 14 | 50 | 30 | 1/2 | 25 mm. | 3/8 in. BSPT-F |

Options: Most models can be ordered with recycler and/or exhaust separator, simply add suffix(es) “**R**” and “**X**”. Recycler models consume 19 GPM of water.

Models suffixed with “**R**” denotes Recycler.

Models suffixed with “**X**” denotes Exhaust Separator.

Example: Vacuum model **AVU10S** with recycler and separator will read as **AVU10SRX**.

Vacuum Dimensions do not include wall mounted air/water separator. **A dedicated electrical circuit** with circuit breaker **must be provided** for each vacuum pump. Ambient temperature must be within the range of 40 degrees Fahrenheit minimum (4°C) to 100 degrees Fahrenheit maximum (38°C). **“AVU”** is UltraVac® **“AVB”** is Classic Bronze™ **“AVG”** is Gold Series™



Twin Vacuum Specification Table

| Vacuum Model | Max. Number of Users | Width | Depth | Height | Total Horsepower | Voltage | Amps (Per Pump) | Breaker Size (GPM) | Total Water* | Consumption (GPM) | Vacuum Inlet Connection (PVC Slip) | Vent Line | Exhaust Separator | Fresh Water Connection (NPT) | 1 Per Twin System | Dispos-A-Bowl Replacement | Per Twin System |
|------------------------|----------------------|--------|--------|--------|------------------|---------|-----------------|--------------------|--------------|-------------------|------------------------------------|-----------|-------------------|------------------------------|------------------------------|---------------------------|-----------------|
| AV/B10TN | 5 | 26 in. | 18 in. | 20 in. | 191 lb. | 2 | 115/208-230 | 16.1/8.1 | 60 | 30/20 | 1.0 | 1 in. | 3/4 in. | N/A | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/B10TNF | 5 | 66 cm. | 46 cm. | 51 cm. | 87 kg. | 2 | 220 | 7.9 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | N/A | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B10TNFX | 5 | 66 cm. | 46 cm. | 76 cm. | 91 kg. | 2 | 220 | 7.9 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | 50.8 mm | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B10TNX | 5 | 26 in. | 18 in. | 30 in. | 200 lb. | 2 | 115/208-230 | 16.1/8.1 | 60 | 30/20 | 1.0 | 1 in. | 3/4 in. | 2 in. | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/G10TNFX / AVU10TNFX | 6 | 66 cm. | 46 cm. | 76 cm. | 90 kg. | 2 | 220 | 7.9 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | 50.8 mm | 3/8 in. BSPT-F | AV/A60011 | |
| AV/G10TNX / AVU10TNX | 6 | 26 in. | 18 in. | 30 in. | 199 lb. | 2 | 115/208-230 | 16.1/8.1 | 60 | 30/20 | 1.0 | 1 in. | 3/4 in. | 2 in. | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/B15TN | 6 | 26 in. | 18 in. | 20 in. | 203 lb. | 3 | 208-230 | 11 | 60 | 20 | 1.0 | 1 in. | 3/4 in. | N/A | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/B15TNF | 6 | 66 cm. | 46 cm. | 51 cm. | 92 kg. | 3 | 220 | 10.6 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | N/A | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B15TNFX | 6 | 66 cm. | 46 cm. | 76 cm. | 96 kg. | 3 | 220 | 10.6 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B15TNX | 6 | 26 in. | 18 in. | 30 in. | 212 lb. | 3 | 208-230 | 11 | 60 | 20 | 1.0 | 1 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/G15TNFX / AVU15TNFX | 7 | 66 cm. | 46 cm. | 76 cm. | 93 kg. | 3 | 220 | 10.6 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60011 | |
| AV/G15TNX / AVU15TNX | 7 | 26 in. | 18 in. | 30 in. | 204 lb. | 3 | 208-230 | 11 | 60 | 20 | 1.0 | 1 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/B20TN | 7 | 26 in. | 18 in. | 22 in. | 217 lb. | 4 | 208-230 | 13.4 | 60 | 20 | 1.0 | 1 in. | 3/4 in. | N/A | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/B20TNF | 7 | 66 cm. | 46 cm. | 56 cm. | 98 kg. | 4 | 220 | 13.4 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | N/A | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B20TNFX | 7 | 66 cm. | 46 cm. | 81 cm. | 103 kg. | 4 | 220 | 13.4 | 50 | 20 | 1.0 | 25.4 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60011 | |
| AV/B20TNX | 7 | 26 in. | 18 in. | 32 in. | 226 lb. | 4 | 208-230 | 13.4 | 60 | 20 | 1.0 | 1 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | |
| AV/G20TNFX / AVU20TNFX | 10 | 66 cm. | 46 cm. | 81 cm. | 104 kg. | 4 | 220 | 13.4 | 50 | 20 | 1.0 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60021 | |
| AV/G20TNX / AVU20TNX | 10 | 26 in. | 18 in. | 32 in. | 229 lb. | 4 | 208-230 | 13.4 | 60 | 20 | 1.0 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60021 | |
| AV/G30TNFX / AVU30TNFX | 12 | 66 cm. | 46 cm. | 81 cm. | 108 kg. | 6 | 220 | 14 | 50 | 30 | 1.0 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60021 | |
| AV/G30TNX / AVU30TNX | 12 | 26 in. | 18 in. | 32 in. | 237 lb. | 6 | 208-230 | 14 | 60 | 30 | 1.0 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60021 | |

Options: All models are equipped with separators, except "AVB10TN", "AVB15TN" and "AVB20TN" models. To order with a water recycler*, simply replace "X" with "R".
For models AV/B10TN, AV/B15TN and AV/B20TN, single pump operation not recommended.

*Recyclers models consume .19 GPM of water per pump. (.38 GPM total per twin system).

Example: A dedicated electrical circuit with recycler will be read as **AVU10TNX**

temperature must be within the range of 40 degrees Fahrenheit minimum (4°C) to 100 degrees Fahrenheit maximum (38°C).
"AVU" is Classic Bronze™
"AVG" is Gold Series™
"AVF" denotes 50Hz systems



Triple Vacuum Specification Table

| Vacuum Model | Max. Number Of Users | Width | Depth | Height | Weight (Shipping) | Total Horsepower | Voltage | Amps (Per Pump) | Breather Size (One Per Pump) | Total Water* (GPM) | Consumption (GPM) | Vacuum Inlet Connection (PVC Slip) | Vacuum Drain Connection (PVC Slip) | Exhaust Separator Vent Link | Fresh Water Connection (NPT) | 3 Needed Per System | Dispos-A-Bowl Replacement | 3 Needed Per System |
|---------------------|----------------------|---------|--------|--------|-------------------|------------------|---------|-----------------|------------------------------|--------------------|-------------------|------------------------------------|------------------------------------|-----------------------------|------------------------------|---------------------|---------------------------|---------------------|
| AVG10RFX / AVU10RFX | 8 | 99 cm. | 46 cm. | 41 cm. | 116 kg. | 3 | 220 | 7.9 | 50 | 20 | 1.5 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60001 | | |
| AVG10RFX / AVU10RX | 8 | 39 in. | 18 in. | 16 in. | 255 lb. | 3 | 208-230 | 8.1 | 60 | 20 | 1.5 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60001 | | |
| AVB10RFX | 7 | 99 cm. | 46 cm. | 41 cm. | 180 kg. | 3 | 220 | 7.9 | 50 | 20 | 1.5 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60001 | | |
| AVB10RX | 7 | 39 in. | 18 in. | 16 in. | 261 lb. | 3 | 208-230 | 8.1 | 60 | 20 | 1.5 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60001 | | |
| AVG15RFX / AVU15RFX | 11 | 99 cm. | 46 cm. | 46 cm. | 124 kg. | 4 1/2 | 220 | 10.6 | 50 | 20 | 1.5 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60001 | | |
| AVG15RX / AVU15RX | 11 | 39 in. | 18 in. | 18 in. | 273 lb. | 4 1/2 | 208-230 | 11 | 60 | 20 | 1.5 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60001 | | |
| AVB15RFX | 10 | 99 cm. | 46 cm. | 46 cm. | 125 kg. | 4 1/2 | 220 | 10.6 | 50 | 20 | 1.5 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60001 | | |
| AVB15RX | 10 | 39 in. | 18 in. | 18 in. | 276 lb. | 4 1/2 | 208-230 | 11 | 60 | 20 | 1.5 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60001 | | |
| AVB20RFX | 12 | 102 cm. | 46 cm. | 53 cm. | 137 kg. | 6 | 220 | 13.4 | 50 | 20 | 1.5 | 32 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60001 | | |
| AVB20RX | 12 | 40 in. | 18 in. | 19 in. | 303 lb. | 6 | 208-230 | 13.4 | 60 | 20 | 1.5 | 1 1/4 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60001 | | |
| AVG20RFX / AVU20RFX | 14 | 102 cm. | 46 cm. | 48 cm. | 139 kg. | 6 | 220 | 13.4 | 50 | 20 | 1.5 | 38 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60011 | | |
| AVG20RX / AVU20RX | 14 | 40 in. | 18 in. | 19 in. | 306 lb. | 6 | 208-230 | 13.4 | 60 | 20 | 1.5 | 1 1/2 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | | |
| AVG30RFX / AVU30RFX | 16 | 102 cm. | 46 cm. | 53 cm. | 150 kg. | 9 | 220 | 14 | 50 | 30 | 1.5 | 38 mm. | 19 mm. | 2 in. | 3/8 in. BSPT-F | AV/A60011 | | |
| AVG30RX / AVU30RX | 16 | 40 in. | 18 in. | 21 in. | 330 lb. | 9 | 208-230 | 14 | 60 | 30 | 1.5 | 1 1/2 in. | 3/4 in. | 50.8 mm | 1/2, 1/4 in. or 3/8 in. Tube | AV/A60011 | | |

Options:

All models are equipped with separators. To order with a water recycler*, simply replace "X" with "R".

*Recycler models consume .19 GPM of water per pump. (.57 GPM total per triple system).

Example: Vacuum model **AVU10RX** with recycler will be read as **AVU10RR**.

Vacuum Dimensions do not include wall mounted air/water separator.

A **dedicated electrical circuit** with circuit breaker **must be provided** for **each** vacuum pump. Ambient temperature must be within the range of 40 degrees Fahrenheit minimum (4 C) to 100 degrees Fahrenheit maximum (38 C).

"**AVU**" is UltraVac®

"**AVG**" is Gold Series™

"**AVB**" is Classic Bronze™

"**F**" denotes 50Hz systems

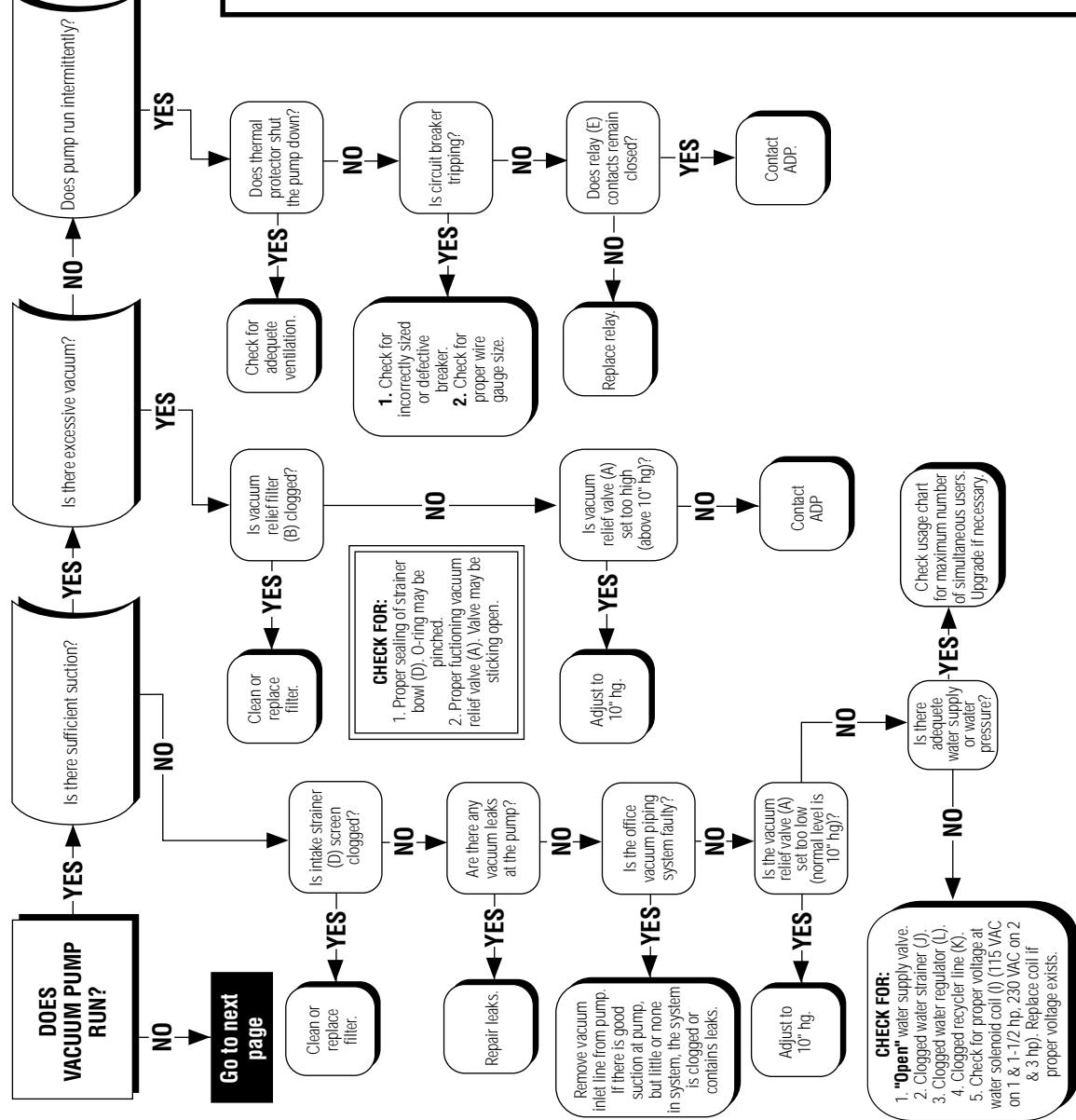
Notes:



For optimum performance, use the **New StayClean™ Product Line** Exclusively by Apollo Dental Products

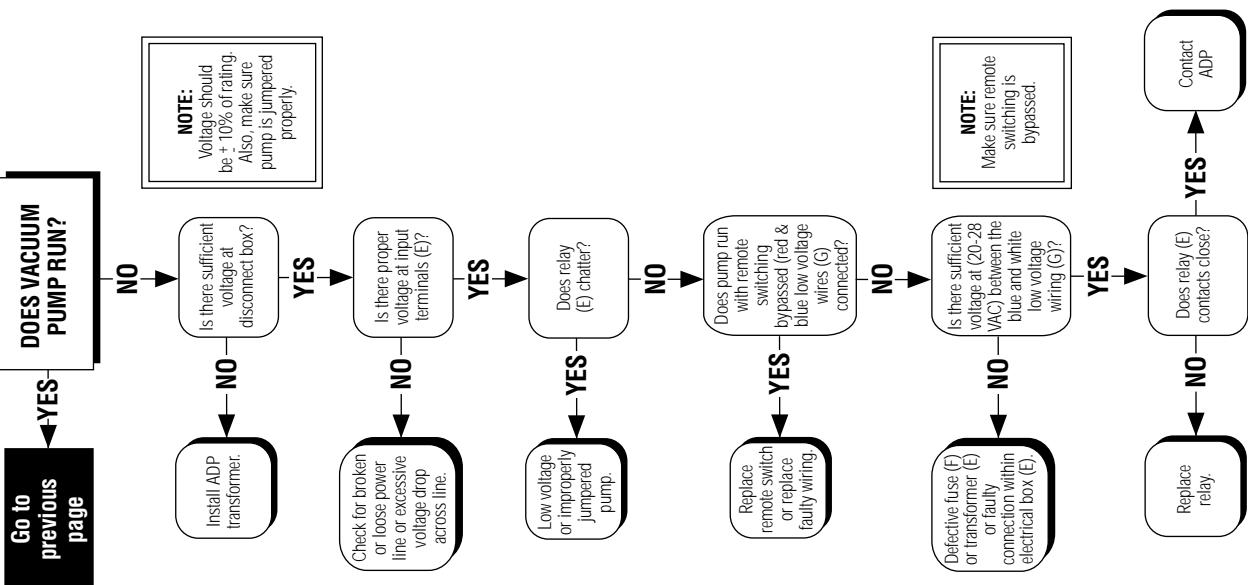
Trouble-Shooting Chart

Single Vacuum



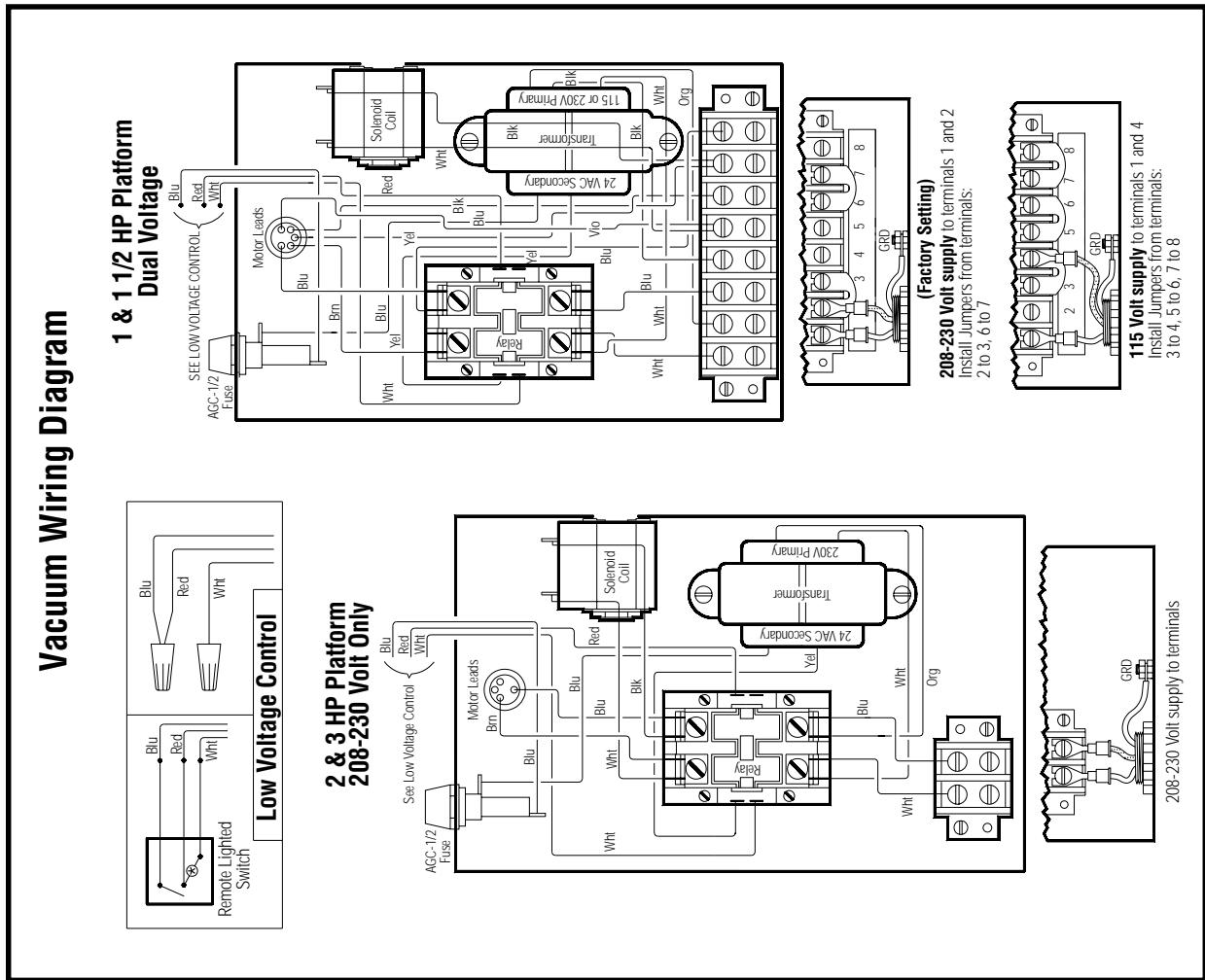
Trouble-Shooting Chart

Single Vacuum

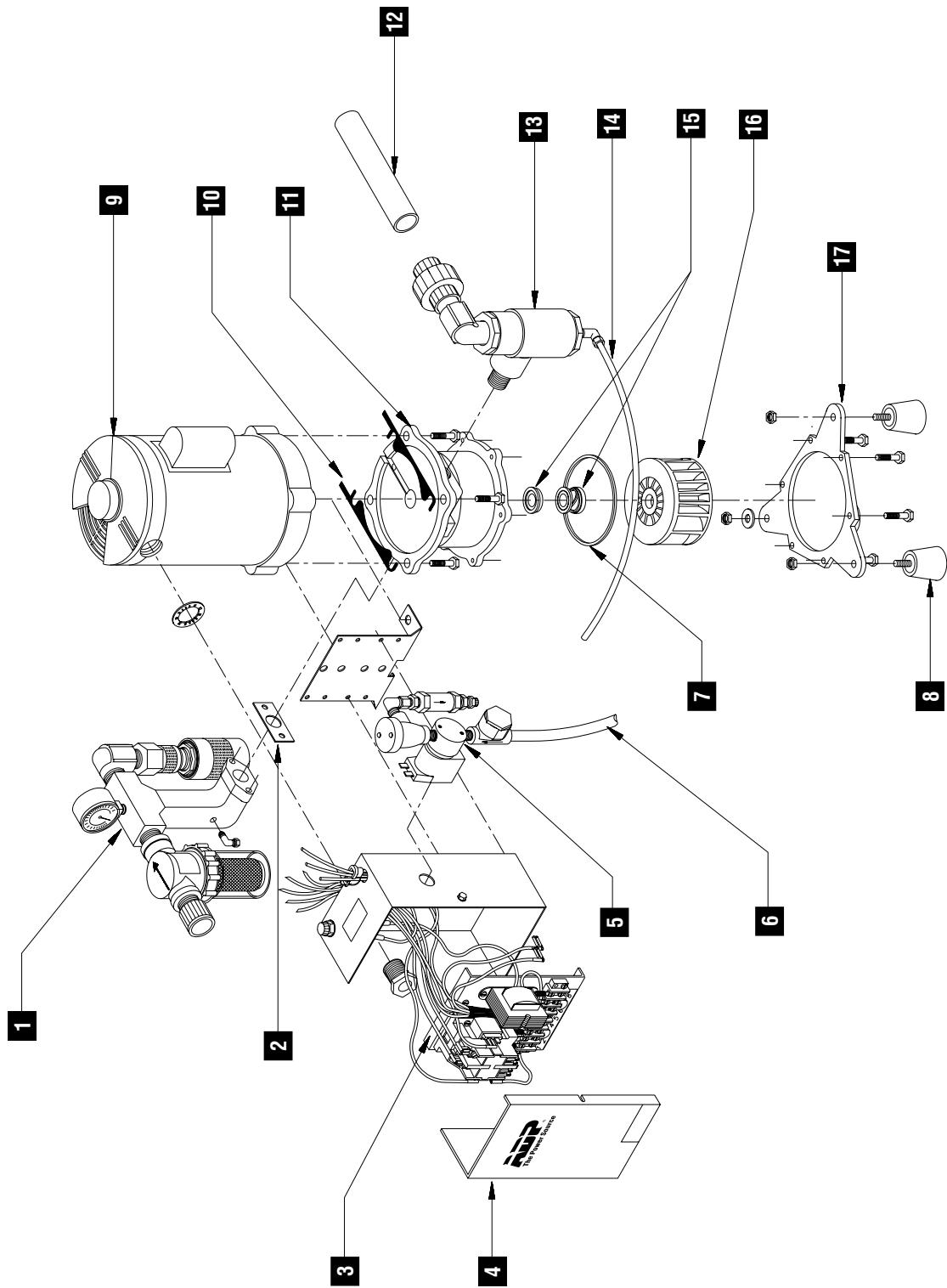


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Vacuum Wiring Diagram



Single Vacuum Model

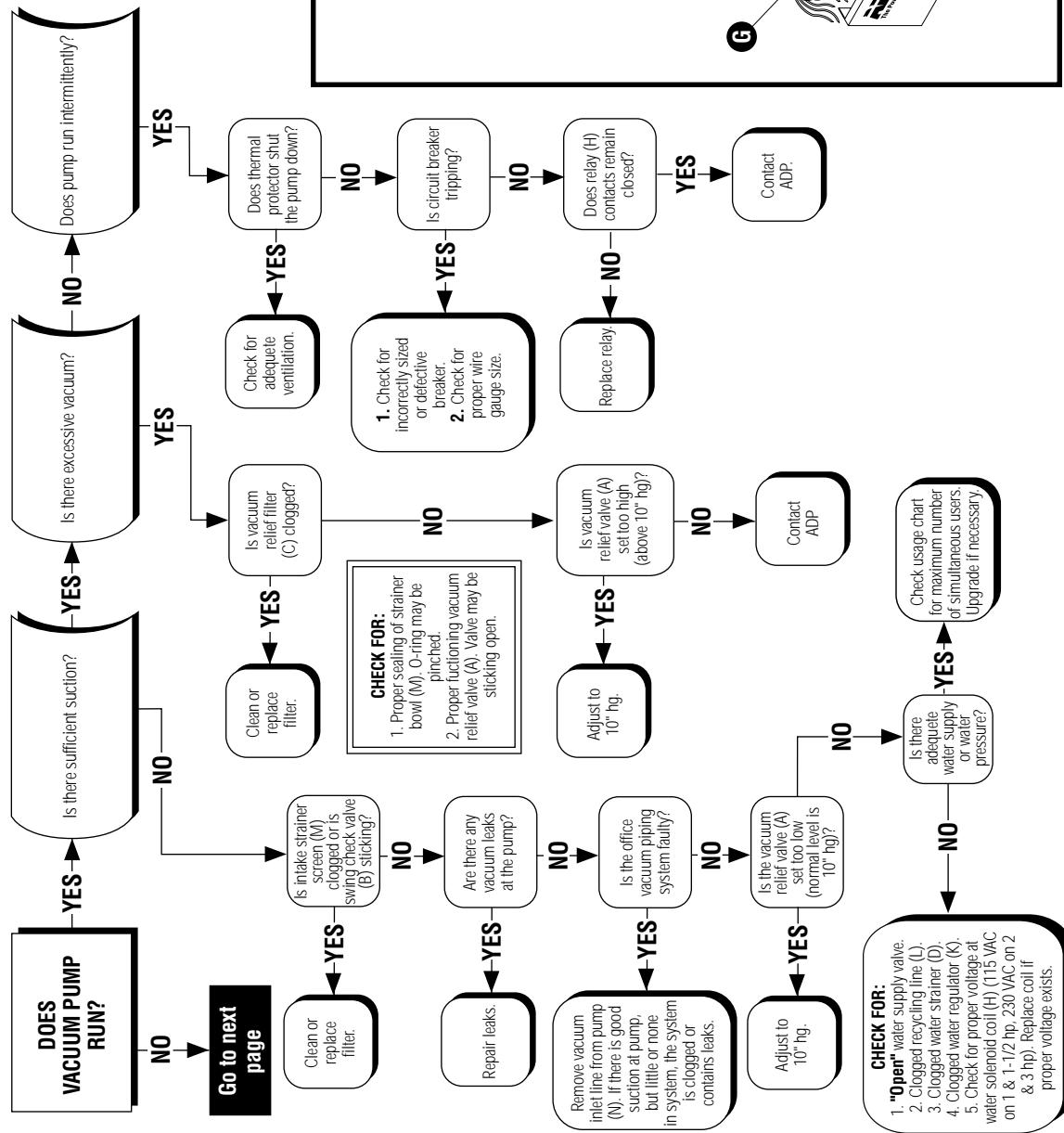


Single Vacuum Model

| Item | Description | Qty. | AVU10SR | AVU15SR | AVU20SR | AVU30SR | AVU30SR | AVG10SR | AVG15SR | AVG20SR | AVG30SR | AVB10SR | AVB15SR | AVB20SR |
|------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | Assembly, Intake Manifold | 1 | AVP95815 | AVP95820 | AVP95820 | AVP95817 | AVP95822 | AVP95810 |
| 1a | Strainer, Complete | 1 | PVC50705 | PVC50705 | PVC50706 | PVC50705 | PVC50706 | PVC50705 |
| 1b | O-Ring, Strainer Bowl | 1 | MRP70935 | MRP70935 | MRP70936 | MRP70935 | MRP70936 | MRP70935 |
| 1c | Dispos-A-Bowl Replacement | 1 | AVA60001 | AVA60001 | AVA60011 | AVA60001 | AVA60011 | AVA60001 |
| 1d | Gauge, 1-30" Hg | 1 | PGA70415 |
| 1e | Manifold | 1 | CVC80535 | CVC80535 | CVC80535 | CVC80535 | CVC80535 | CVC80750 | CVC80750 | CVC80750 | CVC80750 | CVC80750 | CVC80725 | CVC80725 |
| 1f | Valve, Vacuum Relief | 1 | PVW85980 | PVW85980 | PVW85981 | PVW85981 | PVW85980 | PVW85981 | PVW85981 | PVW85980 | PVW85980 | PVW85980 | PVW85980 | PVW85980 |
| 1g | Filter, Vacuum Relief | 1 | SVA95818 | SVA95818 | SVA95819 | SVA95819 | SVA95818 | SVA95818 | SVA95819 | SVA95819 | SVA95818 | SVA95818 | SVA95818 | SVA95818 |
| 2 | Gasket, Intake | 1 | MMS71167 |
| 3 | Assembly, Electrical | 1 | SVA95830 |
| 3a | Block, Terminal | 1 | ECC10250 | ECC10250 | ECC10251 | ECC10251 | ECC10250 | ECC10250 | ECC10251 | ECC10251 | ECC10250 | ECC10250 | ECC10250 | ECC10251 |
| 3b | Jumper, 2 Terminal | 3 | ECC10225 | ECC10225 | --- | --- | ECC10225 | ECC10225 | --- | --- | ECC10225 | ECC10225 | --- | --- |
| 3c | Holder, Fuse | 1 | EMS10935 |
| 3d | Fuse, 1/2 Amp | 1 | EMS10930 |
| 3e | Transformer, 24 V | 1 | ETR10500 |
| 3f | Relay, 24 V | 1 | ETR10460 |
| 4 | Cover, Electrical Box | 1 | ECB80561 |
| 5 | Assembly, Water Solenoid | 1 | SVA95821 | SVA95821 | SVA95820 | SVA95820 | SVA95821 | SVA95820 | SVA95820 | SVA95821 | SVA95821 | SVA95821 | SVA95820 | SVA95820 |
| 5a | Solvent, 1/4" | 1 | PCB50960 |
| 5b | Solenoid, 1/4" w/Coil | 1 | PVW10470 | PVW10470 | PVW10472 | PVW10472 | PVW10470 | PVW10472 | PVW10472 | PVW10472 | PVW10470 | PVW10470 | PVW10470 | PVW10472 |
| 5c | Coil, Solenoid | 1 | EC010102 | EC010102 | EC010104 | EC010104 | EC010102 | EC010104 | EC010104 | EC010104 | EC010102 | EC010102 | EC010104 | EC010104 |
| 5d | Valve, Anti-Siphon | 1 | PVW50595 |
| 5e | Valve, Flow Regulator .19 GPM | 1 | PVW50505 |
| 6 | Hose, 1/4" X8' Water | 1 | SPA97100 |
| 7 | O-Ring, Baseplate | 1 | MRP70955 | MRP70955 | MRP70957 | MRP70955 |
| 8 | Mount, Rubber | 3 | SVA95910 |
| 9 | Motor, Vacuum | 1 | HFM30910 | HFM30910 | HFM30911 | HFM30912 | HFM30910 | HFM30911 | HFM30912 | HFM30912 | HFM30910 | HFM30910 | HFM30911 | HFM30911 |
| 10 | Housing, Shim .005" Vacuum | 2 | MMS71155 |
| 11 | Hosing, Pump | 1 | CVC80500 | CVC80500 | CVC80505 | CVC80505 | CVC80505 | CVC80730 | CVC80740 | CVC80740 | CVC80740 | CVC80740 | CVC80740 | CVC80740 |
| 12 | Hose, PVC Flex 3/4" | 3 ft. | PCT80460 |
| 13 | Recycler, Simple Solution™ | 1 | SVA95500 |
| 14 | Tubing, PolyFlo 1/4" | 1.58 Ft. | PCT80610 |
| 15 | Assembly, Shaft Seal | 1 | SVA95845 | SVA95845 | SVA95847 |
| 16 | Impeller | 1 | CVC80591 | CVC80591 | CVC80597 | CVC80597 | CVC80597 | CVC80735 |
| 17 | Baseplate | 1 | CVC80520 | CVC80520 | CVC80525 | CVC80525 | CVC80525 | CVC80745 |

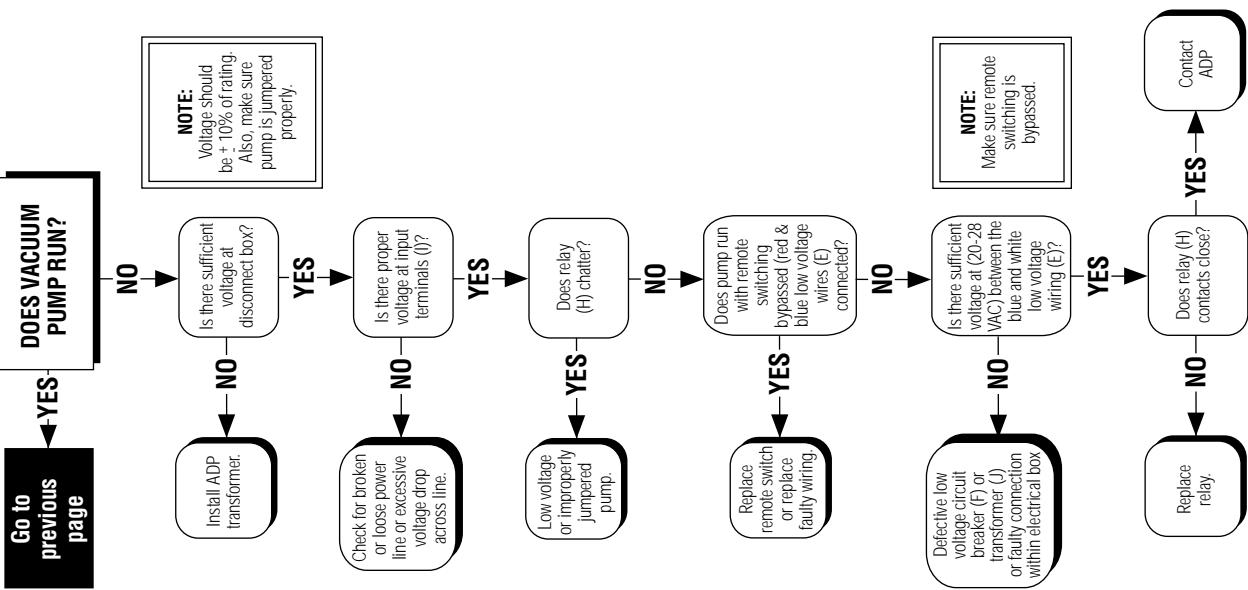
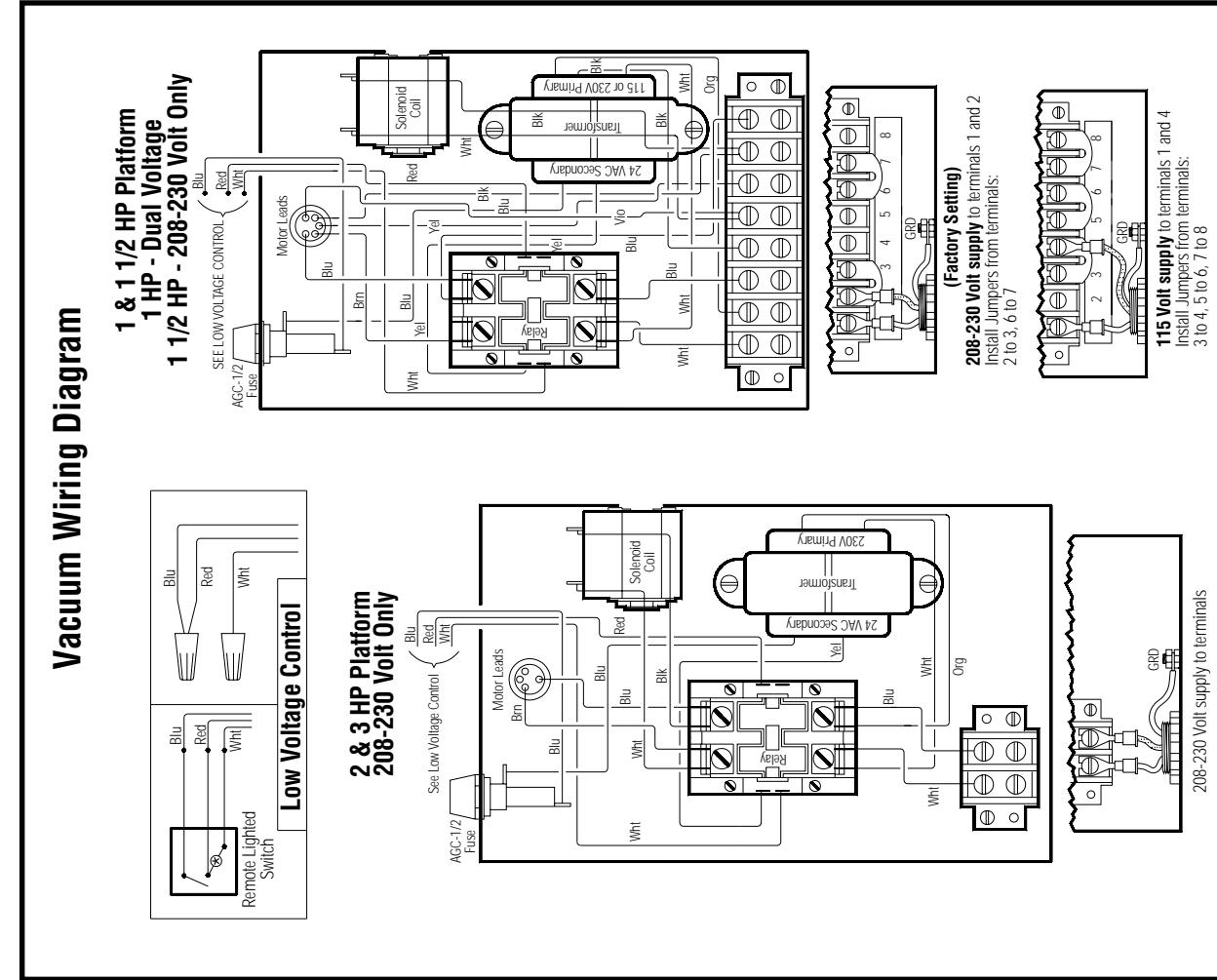
Trouble-Shooting Chart

Twin Vacuum

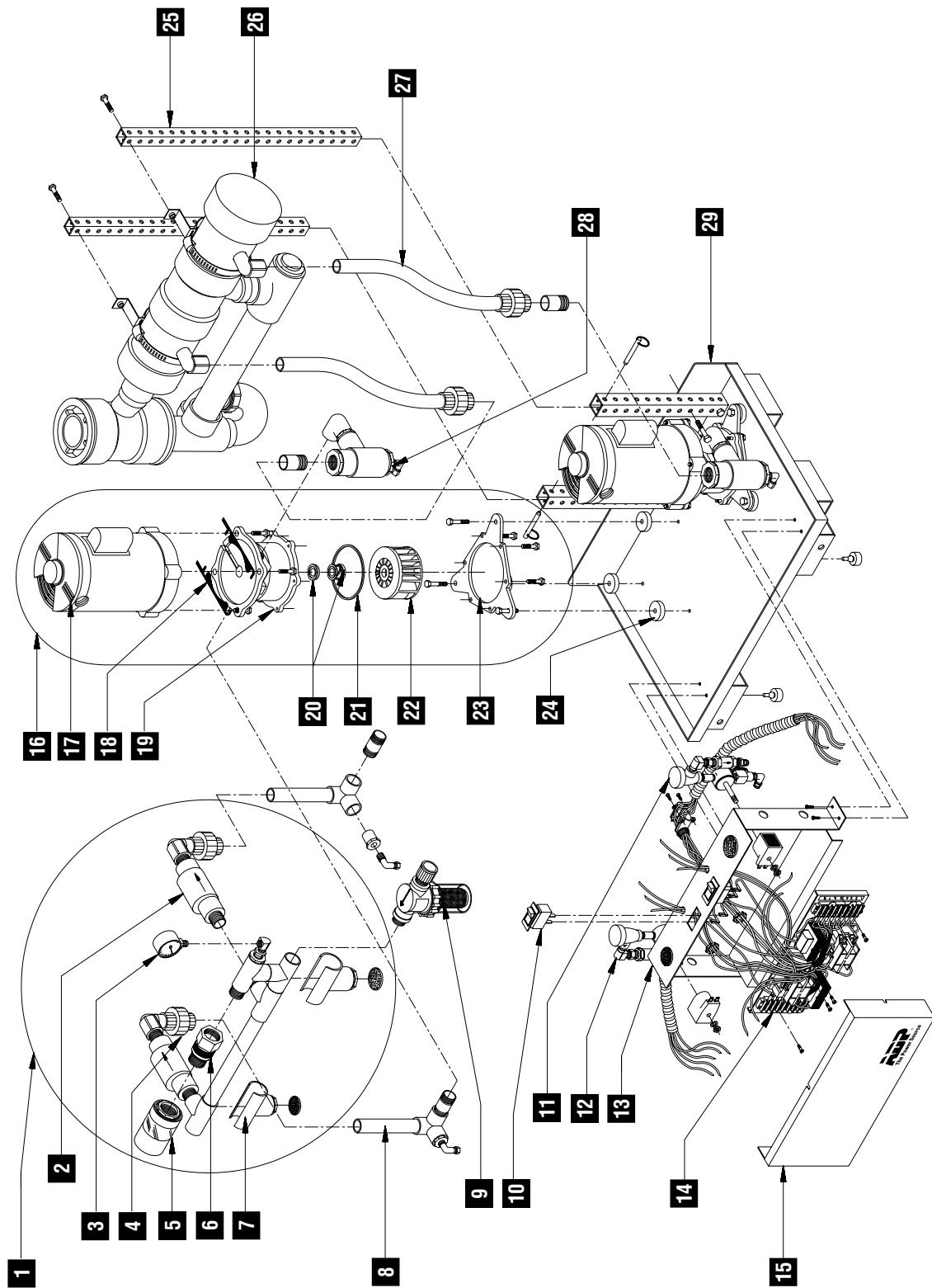


Trouble-Shooting Chart

Twin Vacuum



Twin Vacuum Model

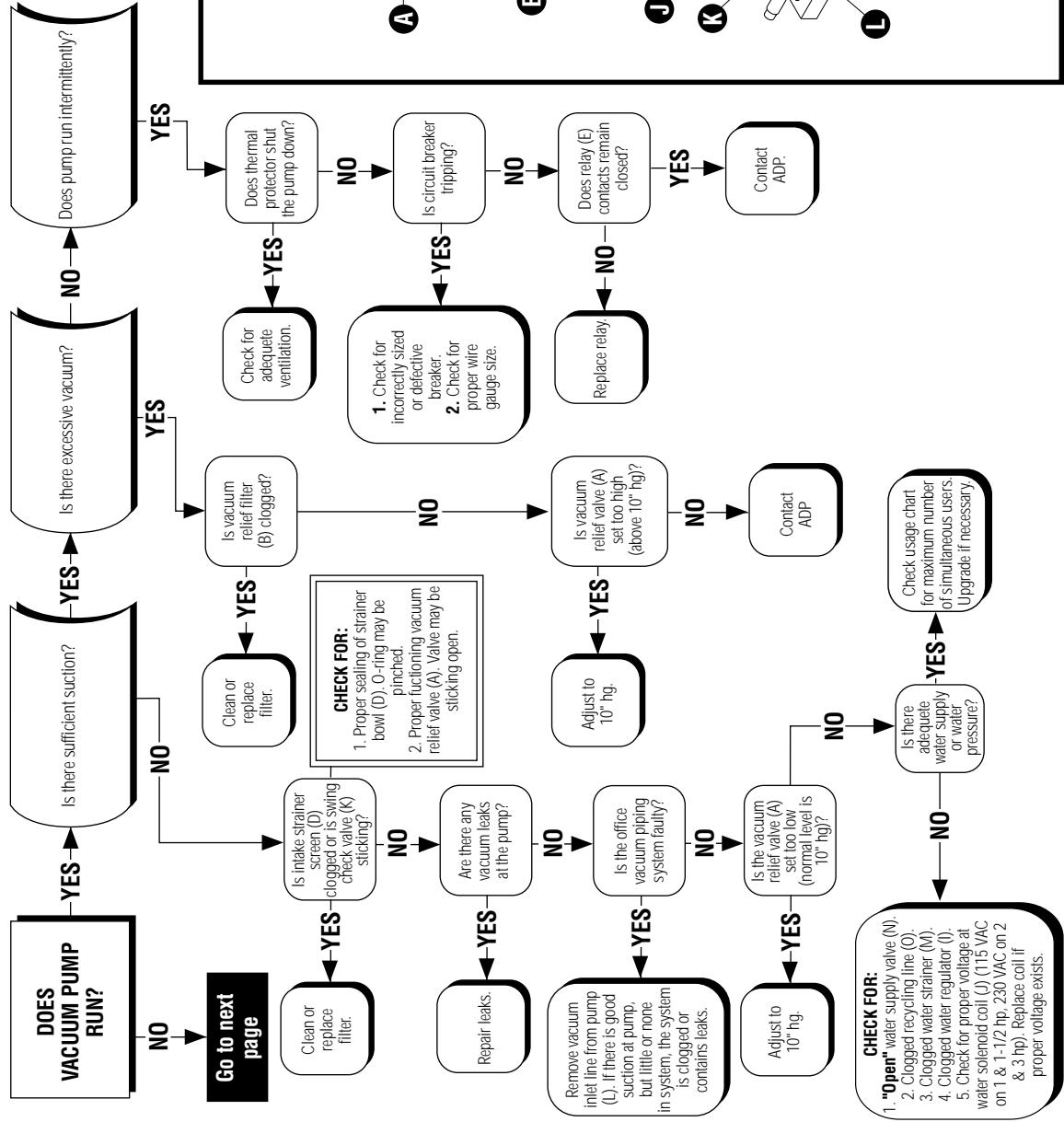


Twin Vacuum Model

| Item | Description | Qty. | AVU10TNR | AVU15TNR | AVU20TNR | AVU30TNR | AVU40TNR | AVG10TNR | AVG15TNR | AVG20TNR | AVG30TNR | AVG40TNR | AVB10TNR | AVB15TNR | AVB20TNR |
|--------|------------------------------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | Assembly, Intake Manifold Complete | 1 | SVA95755 | SVA95755 | SVA95750 | SVA95750 | SVA95755 | SVA95750 | SVA95750 | SVA95750 | SVA95755 | SVA95755 | SVA95755 | SVA95755 | SVA95755 |
| 2 | Twin Vac Check Valve Assembly | 2 | SVA95700 |
| 3 | Gauge, 1-30 hg | 1 | PGA0415 |
| 4 | Union, PVC 3/4" Slip | 2 | PVC50200 |
| 5 | Filter, Vacuum Relief | 1 | SVA95819 |
| 6 | Valve, Vacuum Relief | 1 | PVV85981 |
| 7 | Kit, New Twin Intake Support | 1 | AVA85000 |
| 8 | Kit, Twin Side Outlet Elbow | 2 | SVA95745 |
| 9 | Strainer, Complete | 1 | PVC50706 |
| 9a | O-Ring, Strainer Bowl | 1 | MRP70936 |
| 9b | Dispos-A-Bowl | 1 | AVA60011 |
| 10 | Switch Circuit Breaker | 2 | ECS10422 |
| 11 | Assembly, Water Solenoid (Right) | 1 | SVA95605 |
| 12 | Assembly, Water Solenoid (Left) | 1 | SVA95600 |
| 11-12a | Solenoid w/ Coil | 2 | ECO10102 |
| 11-12b | Coil, Solenoid | 2 | PVV10470 | PVV10470 | PVV10472 | PVV10472 | PVV10470 | PVV10470 | PVV10472 | PVV10472 | PVV10472 | PVV10470 | PVV10470 | PVV10470 | PVV10472 |
| 11-12c | Valve, Anti-Siphon | 2 | PVV50595 |
| 11-12d | Valve, Flow Regulator .19 GPM | 2 | PVN50505 |
| 13 | Electrical Box w/Water Solenoids | 1 | SVA95900 | SVA95900 | SVA95900 | SVA95902 | SVA95900 | SVA95900 | SVA95900 | SVA95902 | SVA95900 | SVA95900 | SVA95900 | SVA95900 | SVA95902 |
| 14 | Platform, Electrical | 2 | SVA95832 | SVA95832 | SVA95833 | SVA95833 | SVA95832 | SVA95833 | SVA95832 | SVA95833 | SVA95833 | SVA95832 | SVA95832 | SVA95832 | SVA95833 |
| 14a | Block, Terminal | 2 | ECC10250 | ECC10250 | ECC10251 | ECC10251 | ECC10250 | ECC10250 | ECC10251 | ECC10251 | ECC10250 | ECC10250 | ECC10250 | ECC10250 | ECC10251 |
| 14b | Jumper, 2 Terminal | 6 | ECC10225 | ECC10225 | --- | --- | ECC10225 | ECC10225 | --- | --- | --- | --- | --- | ECC10225 | --- |
| 14c | Transformer, 24 V | 2 | ETR10500 | ETR10500 | ETR10500 | ETR10500 | ETR10500 | ETR10500 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | --- |
| 14d | Relay, 24 V | 2 | EIR10460 | EIR10460 | EIR10460 | EIR10460 | EIR10460 | EIR10460 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | ECC10225 | --- |
| 15 | Cover, Electrical Box | 1 | ECB80581 |
| 16 | Pump Cartridge | 2 | AVA96028 | AVA96032 | AVA96036 | AVA96040 | AVA96042 | AVA96044 | AVA96046 | AVA96048 | AVA96050 | AVA96052 | AVA96052 | AVA96052 | AVA96052 |
| 17 | Motor, Vacuum | 2 | HFM30905 | HFM30905 | HFM30910 | HFM30911 | HFM30912 | HFM30905 | HFM30910 | HFM30911 | HFM30912 | HFM30905 | HFM30910 | HFM30911 | HFM30911 |
| 18 | Housing, Shim .005 Vacuum | 2 | MMS71155 |
| 19 | Housing, Pump | 1 | CVC80500 | CVC80500 | CVC80505 | CVC80505 | CVC80505 | CVC80730 | CVC80730 | CVC80740 | CVC80740 | CVC80740 | CVC80740 | CVC80740 | CVC80740 |
| 20 | Assembly, Shaft Seal | 2 | SVA95845 | SVA95845 | SVA95845 | SVA95847 | SVA95847 | SVA95845 | SVA95845 | SVA95845 | SVA95847 | SVA95847 | SVA95845 | SVA95845 | SVA95847 |
| 21 | O-Ring, Baseplate | 2 | MRP70955 | MRP70955 | MRP70957 | MRP70957 | MRP70957 | MRP70955 | MRP70955 | MRP70957 | MRP70957 | MRP70955 | MRP70955 | MRP70955 | MRP70955 |
| 22 | Impeller | 2 | CVC80591 | CVC80596 | CVC80597 | CVC80597 | CVC80598 | CVC80591 | CVC80596 | CVC80597 | CVC80597 | CVC80596 | CVC80596 | CVC80596 | CVC80596 |
| 23 | Baseplate | 2 | CVC80520 | CVC80520 | CVC80525 | CVC80525 | CVC80525 | CVC80735 | CVC80735 | CVC80745 | CVC80745 | CVC80745 | CVC80745 | CVC80745 | CVC80745 |
| 24 | Feet/Washer, Pump | 6 | MRP70964 |
| 25 | Square Tubing, 1" Perforated | 2 | STK95500 |
| 26 | Assembly, Super Separator | 1 | AVA95764 |
| 27 | Hose, PVC Flex 3/4" | 4 ft. | PCT180460 |
| 28 | Recycler, Simple Solution | 2 | SVA95500 |
| 29 | Mounting Base | 1 | MBS80540 |
| 29a | Feet, Rubber | 4 | MRP70963 |
| 30 | Kit, Installation (Not Shown) | 1 | SVA85210 |

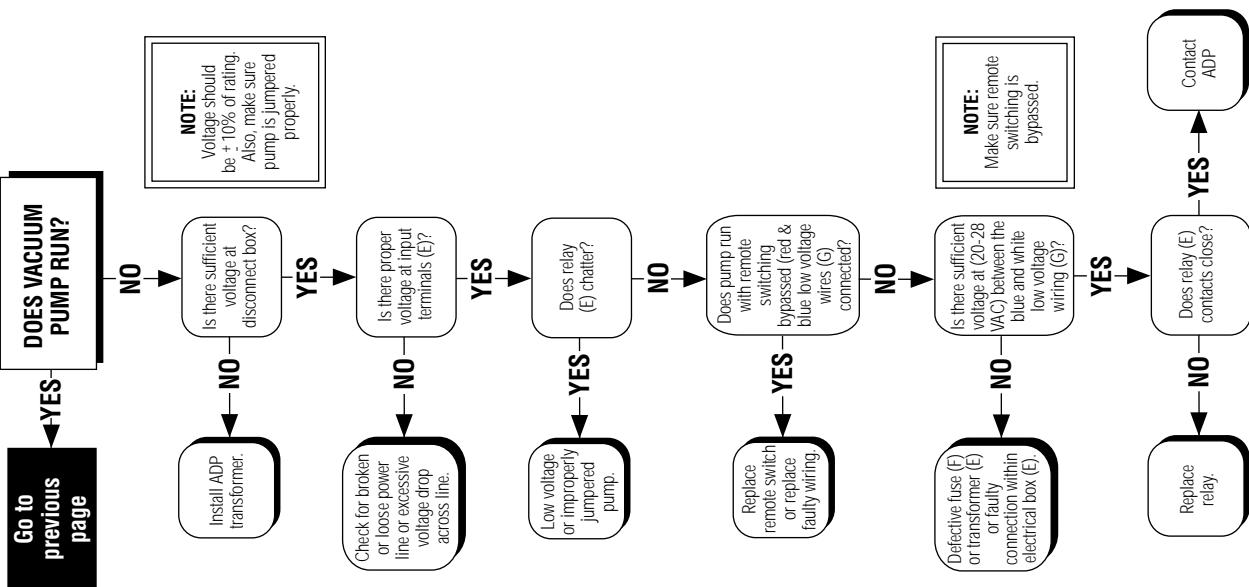
Trouble-Shooting Chart

Triple Vacuum

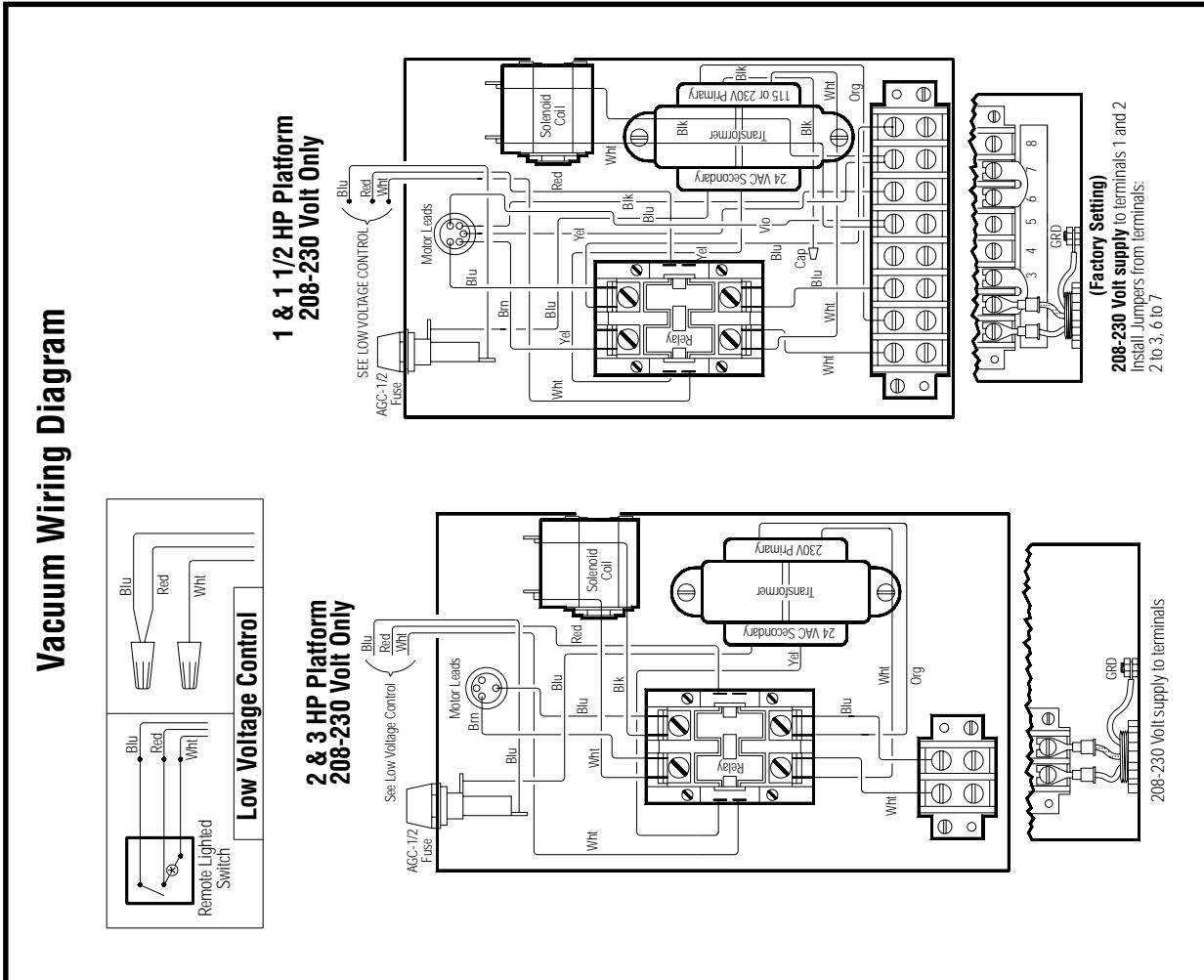


Trouble-Shooting Chart

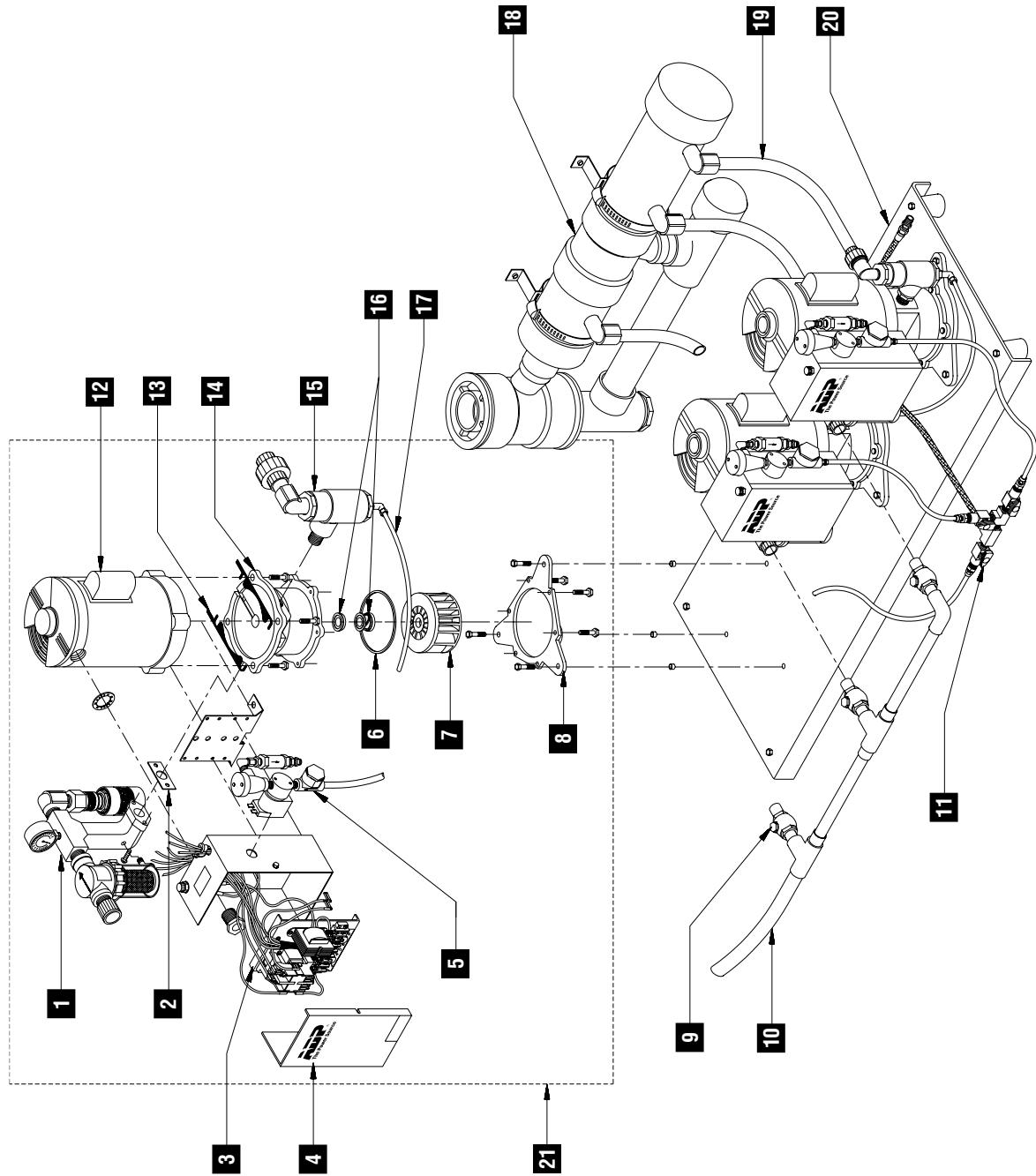
Triple Vacuum



Vacuum Wiring Diagram



Triple Vacuum Model



Triple Vacuum Model

| Item | Description | Qty | AVU10RR | AVU15RR | AVU20RR | AVU30RR | AVU10RR | AVG15RR | AVG20RR | AVG30RR | AVB10RR | AVB15RR | AVB20RR |
|------|-------------------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | Assembly, Intake Manifold | 3 | AVP95815 | AVP95820 | AVP95820 | AVP95820 | AVP95817 | AVP95817 | AVP95822 | AVP95822 | AVP95810 | AVP95810 | AVP95810 |
| 1a | Strainer, Complete | 3 | PVC50/05 | PVC50/05 | PVC50/06 | PVC50/06 | PVC50/05 | PVC50/05 | PVC50/06 | PVC50/05 | PVC50/05 | PVC50/05 | PVC50/05 |
| 1b | O-Ring, Strainer Bowl | 3 | MRP70935 | MRP70935 | MRP70936 | MRP70936 | MRP70935 | MRP70935 | MRP70936 | MRP70935 | MRP70935 | MRP70935 | MRP70935 |
| 1c | Dispos-A-Bowl Replacement | 3 | AVA60001 | AVA60001 | AVA60011 | AVA60011 | AVA60001 | AVA60001 | AVA60011 | AVA60001 | AVA60001 | AVA60001 | AVA60001 |
| 1d | Gauge, 1-30" Hg | 3 | PGA70415 |
| 1e | Manifold | 3 | CVC80535 | CVC80335 | CVC80535 | CVC80535 | CVC80750 | CVC80750 | CVC80750 | CVC80750 | CVC80725 | CVC80725 | CVC80725 |
| 1f | Valve, Vacuum Relief | 3 | PVV85980 | PVV85980 | PVV85981 | PVV85981 | PVV85980 | PVV85980 | PVV85981 | PVV85980 | PVV85980 | PVV85980 | PVV85980 |
| 1g | Filter, Vacuum Relief | 3 | SVA95818 | SVA95818 | SVA95819 | SVA95819 | SVA95818 | SVA95818 | SVA95819 | SVA95818 | SVA95818 | SVA95818 | SVA95818 |
| 2 | Gasket, Intake | 3 | MMS71167 |
| 3 | Assembly, Electrical Platform | 3 | SVA95830 | SVA95830 | SVA95835 | SVA95835 | SVA95830 | SVA95830 | SVA95835 | SVA95835 | SVA95830 | SVA95835 | SVA95835 |
| 3a | Block, Terminal | 3 | ECC10250 | ECC10250 | ECC10251 | ECC10251 | ECC10250 | ECC10250 | ECC10251 | ECC10250 | ECC10250 | ECC10250 | ECC10251 |
| 3b | Juniper, 2 Terminal | 3 | ECC10225 |
| 3c | Holder, Fuse | 3 | EMS10935 |
| 3d | Fuse, 1/2 Amp | 3 | EMS10930 |
| 3e | Transformer, 24 V | 3 | ETR10500 |
| 3f | Relay, 24 V | 3 | ETR10460 |
| 4 | Cover, Electrical Box | 3 | ECB80561 |
| 5 | Assembly, Water Solenoid | 3 | SVA95821 | SVA95821 | SVA95820 | SVA95820 | SVA95821 | SVA95821 | SVA95820 | SVA95821 | SVA95821 | SVA95821 | SVA95820 |
| 5a | Strainer, 1/4" | 3 | PCB50960 |
| 5b | Solenoid, 1/4" (W/Coil) | 3 | PVV10470 | PVV10470 | PVV10472 | PVV10472 | PVV10470 | PVV10472 | PVV10472 | PVV10470 | PVV10470 | PVV10472 | PVV10472 |
| 5c | Coil, Solenoid | 3 | ECO10102 | ECO10102 | ECO10104 | ECO10104 | ECO10102 | ECO10102 | ECO10104 | ECO10104 | ECO10102 | ECO10102 | ECO10104 |
| 5d | Valve, Anti-Siphon | 3 | PVV50595 |
| 5e | Valve, Flow Regulator .19 GPM | 3 | PVV50505 |
| 6 | O-Ring, Baseplate | 3 | MRP70955 | MRP70955 | MRP70957 | MRP70957 | MRP70955 | MRP70957 | MRP70957 | MRP70957 | MRP70955 | MRP70955 | MRP70955 |
| 7 | Impeller | 3 | CVC80591 | CVC80596 | CVC80597 | CVC80598 | CVC80591 | CVC80596 | CVC80597 | CVC80598 | CVC80590 | CVC80595 | CVC80594 |
| 8 | Baseplate | 3 | CVC80520 | CVC80520 | CVC80525 | CVC80525 | CVC80735 | CVC80735 | CVC80745 | CVC80745 | CVC80710 | CVC80735 | CVC80735 |
| 9 | Valve, Check (Brass) | 3 | PVV50657 | PVV50657 | PVV50658 | PVV50658 | PVV50657 | PVV50657 | PVV50658 | PVV50658 | PVV50657 | PVV50657 | PVV50657 |
| 10 | Hose, PVC Flex Intake | 4 ft. | PCT80462 | PCT80462 | PCT80463 | PCT80463 | PCT80462 | PCT80462 | PCT80463 | PCT80462 | PCT80462 | PCT80462 | PCT80462 |
| 11 | Assembly, Water Manifold | 1 | SVA95768 |
| 11a | Hose, 1/4" X8' Water | 1 | SPA97100 |
| 11b | Valve, 1/4" | 3 | PVV50545 |
| 12 | Motor, Vacuum | 3 | HFM30905 | HFM30910 | HFM30912 | HFM30905 | HFM30910 | HFM30910 | HFM30912 | HFM30912 | HFM30905 | HFM30910 | HFM30911 |
| 13 | Housing, Shim .005" Vacuum | 12 | MMS71155 |
| 14 | Housing, Pump | 3 | CVC80500 | CVC80500 | CVC80505 | CVC80505 | CVC80730 | CVC80730 | CVC80740 | CVC80740 | CVC80705 | CVC80705 | CVC80705 |
| 15 | Recycler, Simple Solution™ | 3 | SVA95500 |
| 16 | Assembly, Shaft Seal | 3 | SVA95845 | SVA95845 | SVA95847 | SVA95847 | SVA95845 | SVA95845 | SVA95847 | SVA95847 | SVA95845 | SVA95845 | SVA95847 |
| 17 | Tubing, PolyFl 1/4" | 4.5 ft. | PC180610 |
| 18 | Assembly, Super Separator™ | 1 | AVA95765 |
| 19 | Hose, PCV Flex 3/4" | 12 ft. | PCT80460 |
| 20 | Plate, Mount | 1 | MBS80546 |
| 20a | Feet, Rubber | 4 | SVA85164 | SVA85164 | SVA85164 | SVA85164 | SVA85201 | SVA85201 | SVA85201 | SVA85201 | SVA85201 | SVA85164 | SVA85164 |
| 21 | Replacement Pump Assembly | 3 | AVA95910 | AVA95910 | AVA95911 | AVA95911 | AVA95910 |
| 22 | Kit, Installation | 1 | SVA85164 | SVA85164 | SVA85164 | SVA85164 | SVA85201 | SVA85201 | SVA85201 | SVA85201 | SVA85201 | SVA85164 | SVA85164 |

Glossary of Terms

| | |
|----------------------------|--|
| Air | A mixture of gasses in Earth's atmosphere used to sustain life. Note: In dental work, restorative cosmetic bonding air may be considered ULTRA-Dry if its dew point is less than minus 20 degrees Fahrenheit. |
| Amperage | An electrical term used to describe a unit of current, the ampere. |
| Barometric Pressure | The absolute atmospheric pressure existing at the surface of the Earth. |
| CFM | A volume flow measurement in units of cubic feet per minute. *SCFM = Cubic Feet Per Minute at standard conditions |
| Capacity | A measured volume flow rate used to describe air delivered at conditions of pressure, temperature and existing moisture content in units of CFM. |
| Check Valve | A device that permits flow in one direction only. |
| Compressor | A mechanical device used to deliver compressed air above atmospheric pressure (0 PSIG). |
| Dead-End Pressure | The suction pressure attained by a vacuum pump at zero capacity with the suction absolutely blanked off. Measured in inches of Mercury (HG). |
| Decibel | A measure of pressure waves used to describe sound pressure or noise level or db-A. |
| db-A | The decibel level measured on the "A" weighing scale at 1 meter in height and meter in distance from the sound source. |
| Desiccant | A medium used to extract moisture from air. |
| Dew Point | The temperature at which the vapor (moisture) in air will begin to condense (form dew). |
| Discharge Pressure | The total pressure measured at the discharge (outlet of the compressor). The pressure is commonly expressed in pounds per square inch (PSI). Note: Pressure may be expressed in gauge or absolute pressure. PSIG plus atmospheric equals PSIA. |
| Dryer | A device used to remove moisture from the air. Common types of air dryers include desiccant and refrigerant. |
| FDA | The United States Food and Drug Administration governing medical device manufacturing procedures. |
| Filter | A device for separating and removing dust and dirt from air or water. Note: A Coalescing filter is an ultra fine mechanical device used to remove harmful dusts, fumes, mists, smog, smoke, and aerosols from the air. |

Glossary of Terms

Free Air

Free air is defined as air at atmospheric conditions at any specific location. Because the altitude, barometer, and temperature may vary at different localities and at different times, it follows that this term does not mean air under identical or standard conditions.

Gasket

A device used to provide a seal between two mating surfaces usually made of a soft pliable material.

Grain

A unit of measure of moisture in air. One grain is equal to 1/7000 pound.

Horsepower

A unit of work (See Work). One horsepower is the amount of work required to raise 550 pounds a distance of one foot in one seconds time.

Humidity

In normal terms, humidity has to do with moisture (water vapor) in the atmosphere. Relative humidity (RH) is the ratio of the actual partial vapor pressure in an air-vapor mixture to the saturated vapor pressure at the existing dry-bulb temperature, usually expressed in percentage.

Impeller

The dynamic rotating element of the liquid ring vacuum pump which imparts energy to the flowing medium by means of centrifugal force. It consists of a number of blades mounted so as to move with the motor shaft.

Inches of Mercury

A unit of measure (In-Hg) used to describe vacuum, a pressure below atmospheric and defined as a column of mercury of a specified height having a weight proportional to its height and exerting a force to a unit area.

Inches of Water

13.6 inches of water equals one inch of mercury (See Inches of Mercury above).

Inlet Pressure

The total pressure (static plus velocity) at the inlet of the compressor or vacuum pump. Measured in C.F.M.

KVA

An electrical term used to define transformer ratings of Kilo-Volt-Amperes (Thousands of Volt Amperes).

Liquid Piston-Ring

A rotary vacuum pump in which a veined rotor or impeller revolves in an elliptical casing, with the impeller spaces sealed by a ring of liquid (water) rotating with it inside the casing.

Micron

A unit measure of extremely small particle size, 1 micron = .0004 inches.

N.F.P.A.

National Fire Protection Association. A nonprofit membership organization dedicated to promoting safety from fire, electricity, and related hazards through research, codes and standards, technical advisory services, and public education.

NPT

Abbreviation of the term used to define pipe size of National Pipe Thread.

Glossary of Terms

| | |
|---------------------------------|---|
| Oil | A refined petroleum product used in the cooling and lubrication of reciprocating air compressors. |
| Piston | The reciprocating component of the air compressor which is guided and retained in a compression cylinder. |
| Pressure | Pressure is a force per unit area usually expressed in psi (pounds per square inch) for compressors or In-Hg (inches of Mercury) for vacuums. |
| Reciprocating Compressor | A mechanical device used to compress air in which the reciprocating component is a piston having a reciprocating motion in a cylinder. |
| Saturation | Occurs when the vapor in air is at the dew point or saturation temperature, (See Dew Point). |
| Seal | A device used between rotating and stationary parts to separate, and minimize leakage between areas of unequal pressure. |
| Shaft | The part of the rotating element on which the rotating parts are mounted and by means of which energy is transmitted. |
| Storage Tank | An air tank or receiver used to store air under pressure. |
| SCFM | Air compressor volume flow rate measured in Cubic Feet per Minute at Standard Conditions of 14.7 PSIA and 60 degrees Fahrenheit. |
| Tandem Compressor | Two individual air compressors connected to a common discharge line usually wired to start-run-stop simultaneously. |
| Temperature | A measure of heat or cold (absence of heat) usually expressed in degrees Fahrenheit or degrees Celsius or Centigrade. |
| Transformer | An electrical device used to increase (boost) or decrease (buck) voltage usually rated in KVA, (See KVA). |
| U.L. | The Underwriters Laboratories Incorporated, an independent laboratory testing for public safety. |
| Vacuum | Vacuum is a type of pressure state when air pressure is below atmospheric, usually measured in In-Hg (Inches of Mercury), or In-H ₂ O (Inches of Water). |
| Valve | A device that regulates the flow of air or water. |
| Voltage | An electrical term used to describe an electromotive force expressed in volts. |
| Work | Work is energy in transition (Energy equals a unit of time). Work can't be done unless there is movement. |

Notes:

Notes:

DENTAL SYSTEM PACKAGES

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DENTAL VACUUM PACKAGES

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